

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing Of Claims:

Claim 1 (Currently Amended): An alkali metal generating agent as a supply source of an alkali metal used in formation of A method of producing a photo-cathode for emitting a photoelectron corresponding to incident light or a secondary-electron emitting surface for emitting secondary electrons corresponding to an incident electron, the method comprising the steps of:

preparing a container in which a layer comprised of constituent materials of the photo-cathode or secondary-electron emitting surface to react with an alkali metal is formed;

preparing an alkali metal generating device which includes an alkali metal generating agent as a supply source of an alkali metal, [[said]] the alkali metal generating agent comprising: an oxidizer comprising at least one vanadate with an alkali metal ion as a counter cation; and a reducer for initiating a redox reaction with the oxidizer at a predetermined temperature to reduce the alkali metal ion;

setting the alkali metal generating device in a space continuing an inner space of the container;

depressurizing the space where the alkali metal generating device is set and the inner space of the container by a predetermined vacuum;

heating the alkali metal generating device set in the depressurized space to generate an alkali metal vapor in the depressurized space; and

guiding the alkali metal vapor generated from the heated alkali metal generating device, while controlling a temperature of the container, to an area where the layer is formed.

Claim 2 (Currently Amended): ~~An alkali metal generating agent~~ A method according to claim 1, wherein, in the alkali metal generating agent, the vanadate is expressed by a chemical formula RVO_3 , where R is at least one metal element selected from the group consisting of Na, K, Rb, and Cs.

Claim 3 (Currently Amended): ~~An alkali metal generating agent~~ A method according to claim 1, wherein, in the alkali metal generating agent, the reducer is at least one selected from the group consisting of Si, Zr, Ti, and Al.

Claim 4 (Currently Amended): ~~An alkali metal generating agent~~ A method according to claim 1, the alkali metal generating agent being of a powder form.

Claim 5 (Currently Amended): ~~An alkali metal generating agent~~ A method according to claim 1, the alkali metal generating agent being formed in a pellet form having a predetermined shape by compression molding.

Claim 6 (Currently Amended): ~~An alkali metal generating device for generating an alkali metal used in formation of a photo-cathode for emitting a photoelectron corresponding to incident light or a secondary electron emitting surface for emitting secondary electrons~~

corresponding to an incident electron, said alkali metal generating device comprising: A method according to claim 1, wherein the alkali metal generating device further comprises:

a case housing the alkali metal generating agent;

~~a supply source housed in the case and comprising an alkali metal generating agent according to claim 1; and~~

a discharge port provided in the case and adapted for discharging ~~a vapor of the alkali metal generated in the supply source~~ the alkali metal vapor, from an interior space of the case housing the supply source, toward the exterior of the case.

Claim 7 (Currently Amended): ~~An alkali metal generating device~~ A method according to claim 6, wherein the case is made of a metal.

Claim 8 (Currently Amended): ~~An alkali metal generating device~~ A method according to claim 6, wherein the case comprises:

a hollow container of a metal having apertures at both ends and provided with the discharge port in a side face thereof; and

lid members of a metal covering the respective apertures at the both ends of the hollow container.

Claim 9 (Currently Amended): ~~An alkali metal generating device~~ A method according to claim 6, wherein the case is a hollow container of a metal having apertures at both ends thereof,

wherein the apertures at the both ends of the hollow container are hermetically closed in a state in which the hollow container secures an interior space for housing the alkali metal generating agent, and

wherein the discharge port is provided in at least one of the both ends of the hollow container hermetically closed.

Claim 10 (Currently Amended): ~~An alkali metal generating device~~ A method according to claim 6, wherein the alkali metal generating agent is formed in a pellet form having a predetermined shape,

wherein the case is comprised of a closed-end container of a metal having a recess for housing the alkali metal generating agent, and a lid member of a metal welded to the closed-end container in a state in which the lid member covers an aperture of the recess, and

wherein the discharge port of the case is formed in a non-welded portion between the closed-end container and the lid member.

Claim 11 (Currently Amended): ~~An alkali metal generating device~~ A method according to claim 6, wherein the alkali metal generating device further comprising comprises a glass ampule housing the entire case.

Claim 12 (Currently Amended): ~~An alkali metal generating device~~ A method according to claim 6, wherein the alkali metal generating device further comprising comprises a heating device for initiating the redox reaction of the alkali metal generating agent to generate the vapor of the alkali metal.

Claim 13 (Currently Amended): ~~An alkali metal generating device~~ A method according to claim 12, wherein the heating device comprises a high-frequency supply for heating the alkali metal generating agent by high-frequency heating.

Claim 14 (Currently Amended): A photo-cathode for emitting a photoelectron corresponding to incident light, ~~[[said]]~~ the photo-cathode comprising the alkali metal generated ~~from an alkali metal generating agent by a method~~ according to claim 1.

Claim 15 (Canceled).

Claim 16 (Currently Amended): A secondary-electron emitting surface for emitting secondary electrons corresponding to an incident electron, ~~[[said]]~~ the secondary-electron emitting surface comprising the alkali metal generated ~~from an alkali metal generating agent by a method~~ according to claim 1.

Claim 17 (Canceled).

Claim 18 (Previously Presented): An electron tube comprising a photo-cathode according to claim 14.

Claim 19 (Original): An electron tube according to claim 18, further comprising:

an electron multiplying part comprised of one or more dynodes each having a secondary-electron emitting surface for emitting secondary electrons in accordance with incidence of the photoelectron emitted from the photo-cathode; and

an anode for collecting the secondary electrons outputted from the electron multiplying part and extracting the collected secondary electrons as an electric current to the outside.

Claim 20 (Original): An electron tube according to claim 18, further comprising:

an anode for collecting the photoelectron emitted from the photo-cathode and extracting the collected photoelectron as an electric current to the outside.

Claim 21 (Original): An electron tube according to claim 18, said electron tube comprising an image tube having at least a fluorescent screen for converting the photoelectron emitted from the photo-cathode, into light.

Claim 22 (Original): An electron tube according to claim 18, further comprising a streak tube comprising:

an accelerating electrode for accelerating the photoelectron emitted from the photo-cathode;

a focusing electrode for focusing the photoelectron accelerated by the accelerating electrode;

an anode having an aperture through which the photoelectron focused by the focusing electrode can pass;

a deflecting electrode having a pair of electrode plates opposed to each other and adapted to be able to sweep the photoelectron having passed through the aperture provided in the anode, in a predetermined direction by a predetermined deflection voltage applied between the pair of electrode plates; and

a fluorescent screen for converting the photoelectron deflected by the deflecting electrode, into light.

Claim 23 (Previously Presented): An electron tube comprising an electron multiplying part comprised of one or more dynodes each having a secondary-electron emitting surface according to claim 16.

Claim 24 (Original): An electron tube according to claim 23, further comprising:
a photo-cathode for emitting a photoelectron corresponding to incident light, toward the electron multiplying part; and

an anode for collecting secondary electrons emitted from the electron multiplying part and extracting the collected secondary electrons as an electric current to the outside.

Claims 25-34 (Canceled).

Claim 35 (New): A method according to claim 1, wherein the space, in which the alkali metal generating device is set, constitutes part of the inner space of the container.